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Challenges Presented by the Preliminary Assessment / Site Inspection Process

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The U.S. Army Corps of Engineers (USACE), Buffalo District is responsible for action under the Formerly Utilized Sites Remedial Action Program (FUSRAP) within its jurisdictional boundaries. As part of this responsibility, the Buffalo District determines the necessity for further action at sites considered eligible for FUSRAP. The Preliminary Assessment (PA) and Site Inspection (SI) phases defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) are used as a means of meeting this challenge. This presentation will discuss the Buffalo District's experiences and lessons learned from the PA/SI process at Dayton Unit I, III, IV, the Dayton Warehouse and the former Harshaw Chemical sites.

During the PA phase, historical records are reviewed to evaluate available information associated with the migration of contamination through the soil, water and air pathways to potential receptors. During the SI phase, additional samples are collected to further define the potential for migration through the applicable pathways. Because documentation of historical activities is often limited, the actual site boundaries and potential depth of contamination are normally unknown.

The Buffalo District utilized guidance provided by the U.S. Environmental Protection Agency (EPA) and the Multi Agency Radiation Survey and Site Investigation Manual (MARSSIM) to combine the PA and SI phases with a radiological surface scan. Historical information is evaluated in the PA phase and a radiological survey is completed during the SI. The radiological survey is completed in two stages, with a radiological surface scan followed by sample collection. The radiological scan is a quick and effective way to better define locations with a high potential for contamination. Areas that exhibit contamination during the radiological scan are then subjected to more rigorous sampling with off-site analysis. This process allows rapid and complete determination of areas that are contaminated while minimizing the costs associated with sampling non-impacted areas.

Off-Site laboratory results from sample analysis are then compared to screening levels derived from a screening level risk assessment. This risk assessment is a reduced version of the procedures normally conducted during a remedial investigation. A site conceptual model is created from information gathered during the PA phase. This pathway and potential receptor analysis is used to assist in the selection of the appropriate screening criteria which can be obtained through various federal regulations promulgated by agencies such as the EPA and the Nuclear Regulatory Commission.

Another key component of the PA/SI process is working closely with State agencies, and other stakeholders to ensure that they are aware of our process and investigation. This coordination enables all parties to participate in the assessment and provide input to the Corps of Engineers decision at our sites.

Buffalo District's thorough approach in conducting PA/SI's ensures that a high quality, cost effective assessment is completed which involves input from involved regulatory agencies and key stakeholders. The result of the combined PA/SI is a technically and legally sound determination on the need for further action at a site or portions of the site.